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## GENERAL RECOMMENDATIONS

**TABLE 1:** Licensed Vaccines and Toxoids

**TABLE 2:** Immune Globulins and Antitoxins

**TABLE 3:** Childhood Immunization Schedule

**TABLE 4:** Accelerated Immunization Schedule-<7 years of age

**TABLE 5:** Immunization Schedule- $\geq$ 7 years of age and not vaccinated in infancy

**TABLE 6:** Live-Killed Antigen Intervals

**TABLE 7:** Immune Globulin-Vaccine Intervals

**TABLE 8:** Antibody-Measles Vaccine Intervals

**TABLE 9:** Contraindications and Precautions

**TABLE 10:** Minimum Ages and Minimum Intervals

Centers for Disease Control and Prevention. General Recommendations on Immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). Morbidity and Mortality Weekly Report (MMWR). 1994; 43(No. RR-1): 1-38.

## DEFINITIONS

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**Immunobiologic:** Immunobiologics include antigenic substances, such as vaccines and toxoids, or antibody-containing preparations, such as globulins and antitoxins, from human or animal donors. These products are used for active or passive immunization or therapy. The following are examples of immunobiologics:

**a) Vaccine:** A suspension of live (usually attenuated) or inactivated microorganisms (e.g., bacteria, viruses, or rickettsiae) or fractions thereof administered to induce immunity and prevent infectious disease or its sequelae. Some vaccines contain highly defined antigens (e.g., the polysaccharide of *Haemophilus influenzae* type b or the surface antigen of hepatitis B); others have antigens that are complex or incompletely defined (e.g., killed *Bordetella pertussis* or live attenuated viruses).

**b) Toxoid:** A modified bacterial toxin that has been made nontoxic, but retains the ability to stimulate the formation of antitoxin.

**c) Immune globulin (IG):** A sterile solution containing antibodies from human blood. It is obtained by cold ethanol fractionation of large pools of blood plasma and contains 15%-18% protein. Intended for intramuscular administration, IG is primarily indicated for routine maintenance of immunity of certain immunodeficient persons and for passive immunization against measles and hepatitis A. IG does not transmit hepatitis B virus, human immunodeficiency virus (HIV), or other infectious diseases.

**d) Intravenous immune globulin (IGIV):** A product derived from blood plasma from a donor pool similar to the IG pool, but prepared so it is suitable for intravenous use. IGIV does not transmit infectious diseases. It is primarily used for replacement therapy in primary antibody-deficiency disorders, for the treatment of Kawasaki disease, immune thrombocytopenic purpura, hypogammaglobulinemia in chronic lymphocytic leukemia, and some cases of HIV infection.

**e) Specific immune globulin:** Special preparations obtained from blood plasma from donor pools preselected for a high antibody content against a specific antigen (e.g., hepatitis B immune globulin, varicella-zoster immune globulin, rabies immune globulin, tetanus immune globulin, vaccinia immune globulin, and cytomegalovirus immune globulin). Like IG and IGIV, these preparations do not transmit infectious diseases.

**f) Antitoxin:** A solution of antibodies (e.g., diphtheria antitoxin and botulinum antitoxin) derived from the serum of animals immunized with specific antigens. Antitoxins are used to confer passive immunity and for treatment.

## Vaccination and Immunization

**Vaccination** and **vaccine** derive from **vaccinia**, the virus once used as smallpox vaccine. Thus, vaccination originally meant inoculation with vaccinia virus to make a person immune to smallpox. Vaccination currently denotes the physical act of administering any vaccine or toxoid.

**Immunization** is a more inclusive term denoting the process of inducing or providing immunity artificially by administering an immunobiologic. Immunization can be active or passive.

**Active immunization** is the production of antibody or other immune responses through the administration of a vaccine or toxoid. **Passive immunization** means the provision of temporary immunity by the administration of preformed antibodies. Three types of immunobiologics are administered for passive immunization: a) pooled human IG or IGIV, b) specific immune globulin preparations, and c) antitoxins.

Although persons often use **vaccination** and **immunization** interchangeably in reference to active immunization, the terms are not synonymous because the administration of an immunobiologic cannot be automatically equated with the development of adequate immunity.

### Reference:

Centers for Disease Control and Prevention. Manual for the surveillance of vaccine-preventable diseases. Centers for Disease Control and Prevention: Atlanta, GA, 1997.